| | (FILE | 'HOME' ENTERED AT 11:27:47 ON 04 MAR 2003) |
|----------|-------|---|
| | FILE | 'REGISTRY' ENTERED AT 11:28:04 ON 04 MAR 2003 E TEXAPON O/CN |
| L1 | | 9 S E1, E2, E3-E12 E SULFURIC ACID ALKYL ESTER/CN |
| L2 | | E SULFURIC ACID ESTER/CN 1 S SULFURYL CHLORIDE/CN |
| | FILE | 'CAPLUS' ENTERED AT 11:51:47 ON 04 MAR 2003 |
| L3 L4 | | 0 S L1 AND ALKYL ALCOHOL 154 S L1 AND ALCOHOL |
| L5 | | 49 S L4 AND ETHOXYLATED |
| | FILE | 'REGISTRY' ENTERED AT 12:13:35 ON 04 MAR 2003 |
| | FILE | 'CAPLUS' ENTERED AT 12:13:36 ON 04 MAR 2003 |
| L6 | | 33 S L2 AND ALCOHOL |
| L7 L8 | | 0 S L2 AND ETHOXYLATED ALCOHOL 108 S L2 AND ESTERS |
| | | |

WEST Search History

DATE: Tuesday, March 04, 2003

| Set Name side by side | Query | Hit Count | Set Name result set |
|-----------------------|---------------------------------|-----------|------------------------|
| DB=US | SPT; PLUR=YES; OP=ADJ | | |
| L10 | L9 and ((8/\$)!.CCLS.) | 24 | L10 |
| L9 | sulfation same alcohol | 613 | L9 |
| L8 | sulfation smae alcohol | 0 | L8 |
| L7 | L5sulfation smae alcohol | 0 | L7 |
| L6 | L5sulfation smae alcohol | 0 | L6 |
| L5 | dobanol same sulfuryl chloride | 0 | L5 |
| L4 | dobanol samd sulfuryl chloride | 0 | L4 |
| L3 | L2 and sulfuryl chloride | 0 | L3 |
| L2 | ((558/20)!.CCLS.) | 77 | L2 |
| L1 | sulfuryl chloride near3 alcohol | 24 | L1 |

END OF SEARCH HISTORY

WEST Search History

DATE: Tuesday, March 04, 2003

| Set Nam | <u>e Query</u> le | Hit Count | Set Name result set | |
|---------|---------------------------------|-----------|------------------------|--|
| DB = U | JSPT; PLUR=YES; OP=ADJ | | | |
| L5 | dobanol same sulfuryl chloride | 0 | L5 | |
| L4 | dobanol samd sulfuryl chloride | 0 | L4 | |
| L3 | L2 and sulfuryl chloride | 0 | L3 | |
| L2 | ((558/20)!.CCLS.) | 77 | L2 | |
| L1 | sulfuryl chloride near3 alcohol | 24 | L1 | |

END OF SEARCH HISTORY

| WEST | *************************************** |
|---------------------|---|
| | |
| Generate Collection | Print |

L10: Entry 8 of 24

File: USPT

Jul 4, 1995

DOCUMENT-IDENTIFIER: US 5429684 A

TITLE: Water-based carpet cleaning composition and method

Brief Summary Text (14):

Particularly suitable surfactants of the sulfate type are the sulfuric acid monoesters of long-chain primary alcohols of natural and synthetic origin containing 10 to 20 carbon atoms, i.e. fatty alcohols such as, for example, coconut oil fatty alcohols, tallow fatty alcohols, oleyl alcohol, or the C.sub.10-20 oxoalcohols and those of secondary alcohols having the same chain length. Other particularly suitable surfactants of the sulfate type are the sulfation products of the reaction products of C.sub.4-12 alcohols alkoxylated with 1 to 12 mol ethylene oxide with 1,2-epoxyalkanes which may be obtained, for example, by the process described in DE-OS 37 23 354. In addition, the sulfuric acid monoesters of aliphatic primary or secondary alcohols alkoxylated with 1 to 6 mol ethylene oxide may be used. Suitable surfactants of the sulfonate type are the alkane sulfonates obtainable from C.sub.12-18 alkanes by sulfochlorination or sulfoxidation and subsequent hydrolysis or neutralization and the olefin sulfonates obtained from long-chain monoolefins having a terminal or internal double bond by sulfonation with gaseous sulfur trioxide and subsequent alkaline or acidic hydrolysis of the sulfonation products.

Detailed Description Paragraph Table (1): _ Composition of the cleaning TABLE 1 compositions according to the invention [% by weight] CC1 CC2 CC3 CC4 T1 60 25 20 24 7.times. Ethoxylated C.sub.9/11 alcohol -- 20 -- 6 (Lutensol .RTM. ON 70; BASF) C.sub.12/14 alkyl glucoside, degree -- -- 20 -- of polymerization 1.4 6.times. Ethoxylated C.sub.12/14 fatty acid -- -- -- 8 (Eumulgin .RTM. Ti 60; Henkel) Li C.sub.8/12 alkyl sulfate ---- 5 -- (Texapon .RTM. LLS; Henkel) Sulfated hydroxyether.sup.a) -- 10 -- 8 Na nitrilotriacetate -- 0.2 -- 0.8 Na tripolyphosphate -- -- 3 --Poly(methylmethacrylate) -- 10 -- -- (Neocryl .RTM. NH 20; ICI) Copolymer of acrylic acid and -- -- 5 -- styrene (Ubatol .RTM. TR 1138; Stapol) Ethanol 5 -- 3 --Propylene glycol monobutyl -- 10 -- 6 ether Chloroacetamide -- 0.2 0.2 0.2 Water, _ .sup.a) Na salt of the fragrance, dye ad 100 sulfation product of the reaction product of Nbutanol alkoxylated with 10 mol equivalents ethylene oxide with 1,2epoxyoctane according to DE 37 23 354

Current US Cross Reference Classification (7):
8/137

| | WEST | |
|------|------------------|-------|
| | | |
| Gene | erate Collection | Print |

L10: Entry 23 of 24

File: USPT

Feb 24, 1976

DOCUMENT-IDENTIFIER: US 3940340 A

TITLE: Peracylated polyamines compatible with optical brighteners as activators for inorganic peroxo compounds

Brief Summary Text (17):

The surfactants may either be uniform products or mixtures on the basis of anionic or nonionic compounds. They may, for example, consist entirely or to a proportion of about 10 to 50 % by weight of soaps that may be derived from natural or synthetic fatty acids. They may further consist entirely of surface-active compounds of the sulfate or sulfonate type or may contain these compounds in an amount of about 30 to 70 %. Products of this type are, for example, long-chain alkyl-aryl sulfonates and aliphatic sulfonates, for example, long-chain alkane sulfonates, alkene sulfonates, oxyalkane sulfonates, furthermore, fatty alcohol sulfates and sulfation products of alkoxylated alkyl phenols, fatty acid amides or fatty acid alkylol amides containing about 1 to 20 ethoxy and/or propoxy radicals in the molecule, and sulfated monoglycerides. The anionic surfactants suitable for the use in detergents have been disclosed in detail, for example, in "Surface Active Agents and Detergents" by Schwartz, Perry and Berch, vol. II (1958), pages 25 to 102.

<u>Current US Cross Reference Classification</u> (6): 8/648

```
NΑ
     1991:214158 CAPLUS
     114:214158
DΝ
     Reversed-phase high-performance liquid chromatographic method for the
ΤI
     assay of 1,4-dioxane in sulfated polyoxyethylene alcohol
     surfactants
AU
     Scalia, S.
CS
     Dip. Sci. Farm., Univ. Ferrara, Ferrara, 44100, Italy
     Journal of Pharmaceutical and Biomedical Analysis (1990), 8(8-12), 867-70
SO
     CODEN: JPBADA; ISSN: 0731-7085
DT
     Journal
LΑ
     English
CC
     62-4 (Essential Oils and Cosmetics)
AΒ
     A rapid HPLC method was developed for the assay of 1,4-dioxane in
     ethoxylated fatty alc. sulfates. After solid-phase extn. using
     Bakerbond C18 cartridges, samples were directly analyzed on a
LiChrosphere
     CH-8 reversed-phase column with UV detection at 200 nm and an MeCN-H2O
     eluent. Recovery of 1,4-dioxane from the surfactant matrix was 95.7% in
     the 40 to 120 \cdotmu.g g-1 range. The min. quantifiable amt. was 18 \cdotmu.g g-1. The procedure is simple, reproducible, specific and suitable for
     routine analyses of com. surfactants.
ST
     dioxane detn HPLC surfactant cosmetic; chromatog liq dioxane surfactant;
     polyoxyethylene fatty alc sulfate dioxane
IT
     Cosmetics
        (ethoxylated fatty alc. sulfates as surfactants for, dioxane
        detn. by HPLC in)
     Surfactants
IT
        (ethoxylated fatty alc. sulfates, dioxane detn. by HPLC in
        cosmetic)
ΙT
     123-91-1, 1,4-Dioxane, analysis
     RL: ANT (Analyte); ANST (Analytical study)
        (detn. of, in ethoxylated fatty alc. sulfates as cosmetic
        surfactants by reversed-phase HPLC)
ΙT
     34870-92-3D, Sulfuric acid, alkyl ethers.
     RL: AMX (Analytical matrix); ANST (Analytical study)
        (dioxane detn. in, as cosmetic surfactants, by HPLC)
ΙT
     9004-82-4, Zetesol 250
                               32612-48-9, Zetesol AP
                                                        34870-92-3D,
     C12-14-alkyl ethers, sodium salts 62755-21-9, Texapon MG
     90026-22-5, Texapon SBN 92047-64-8, Texapon K 14S Special
     133137-20-9, Zetesol ME 70 133653-23-3, Zetesol 856T
     RL: AMX (Analytical matrix); ANST (Analytical study)
        (dioxane detn. in, by HPLC)
ΙT
     27731-62-0, Sodium myreth sulfate
     RL: BIOL (Biological study)
        (surfactant contg., dioxane detn. in, by HPLC)
```

ANSWER 41 OF 49 CAPLUS COPYRIGHT 2003 ACS

```
ANSWER 28 OF 49 CAPLUS COPYRIGHT 2003 ACS
AN
     1995:986713 CAPLUS
DN
     124:201644
ΤI
     Preparation of sulfurate ester salts
IN
     Nishihata, Takao; Uda, Yukio; Jinno, Kazuto
     Dai Ichi Kogyo Seiyaku Co Ltd, Japan
SO
     Jpn. Kokai Tokkyo Koho, 6 pp.
     CODEN: JKXXAF
DT
     Patent
LΑ
     Japanese
     ICM C07C307-02
     ICS C07C303-00
CC
     23-17 (Aliphatic Compounds)
FAN.CNT 1
     PATENT NO.
                    KIND DATE
                                         APPLICATION NO. DATE
     ------
                                          -----
                     A2 19951003
     JP 07252206
                                          JP 1994-67759 19940311
     JP 2720289
                     B2 19980304
PRAI JP 1994-67759
                           19940311
     The title compds. are prepd. by treating H2NSO3H (I) with reactants in in
     addn. of phosphinic acid and/or its salts. A mixt. of lauryl alc., I,
and
     phosphinic acid was treated at 130.degree. for 1 h, then mixed with aq.
     NH3 at 80.degree. and pH 8.0 to give 99.4% lauryl sulfate ammonium salts
     with APHA no. 20.
     sulfate ester salt prepn; discoloration prevention sulfate ester salt;
     sulfation sulfamic acid phosphinate
IT
     Sulfation
        (prepn. of sulfate ester salts with low discoloration by sulfation
with
        H2NSO3H using phosphinates)
ΙT
     Alcohols, preparation
     RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP
     (Preparation)
        (C12-13, ethoxylated, esters with sulfamic acid; prepn. of
        sulfate ester salts with low discoloration by sulfation with H2NSO3H
        using phosphinates)
IΤ
     Esters, preparation
     RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP
     (Preparation)
        (castor-oil, with sulfamic acid; prepn. of sulfate ester salts with
low
        discoloration by sulfation with H2NSO3H using phosphinates)
     108-95-2DP, Phenol, styrenated, reaction product with polyethylene oxide,
TΤ
                   110-11-2P, Octyl sulfate 143-03-3P, Stearyl sulfate
     sulfate salts
     2235-54-3P, Lauryl sulfate ammonium salt 7747-53-7P 9081-17-8P
     25322-68-3DP, reaction product with styrenated phenol, sulfate salts
     26183-44-8P 55028-14-3P
                               86592-29-2P 135413-96-6P 174172-22-6P
    RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP
     (Preparation)
        (prepn. of sulfate ester salts with low discoloration by sulfation
with
       H2NSO3H using phosphinates)
TΤ
    111-87-5, Octyl alcohol, reactions 112-53-8, Lauryl
    alcohol
              112-92-5, Stearyl alcohol 143-28-2, Oleyl
    alcohol
             5329-14-6, Sulfamic acid 6303-21-5, Phosphinic acid
    7681-53-0, Sodium phosphinate
                                   7803-65-8, Ammonium phosphinate
    9002-92-0, Poly(ethylene oxide) lauryl ether 9004-98-2, Poly(ethylene
    oxide) oleyl ether 9016-45-9 26635-75-6 39278-93-8 106392-12-5,
    Ethylene oxide-propylene oxide block copolymer
```

```
(prepn. of sulfate ester salts with low discoloration by sulfation
with
        H2NSO3H using phosphinates)
    ANSWER 29 OF 49 CAPLUS COPYRIGHT 2003 ACS
L5
    1995:967541 CAPLUS
AN
    124:175415
DN
    Preparation of sulfate ester salts
ΤI
    Nishihata, Takao; Uda, Yukio; Jinno, Kazuto
IN
    Dai Ichi Kogyo Seiyaku Co Ltd, Japan
PΑ
    Jpn. Kokai Tokkyo Koho, 11 pp.
SO
    CODEN: JKXXAF
DT
    Patent
    Japanese
LA
    ICM C07C305-06
IC
    ICS C07B045-00; C07C303-24; C07C305-14
     23-17 (Aliphatic Compounds)
CC
FAN.CNT 1
                    KIND DATE
                                        APPLICATION NO. DATE
    PATENT NO.
     _____
                                         ______
    JP 07242617 A2 19950919
                                         JP 1994-31474
                                                         19940301
PΙ
                          19940301
PRAI JP 1994-31474
    The title compds. are prepd. by treating H2NSO3H (I) with reactants in
    which I is wet grinding in the reactants. A mixt. of lauryl alc., I, and
    urea was wet ground to give a slurry, which was treated at 130.degree.
for
     1 h, mixed with aq. NH3 at 80.degree. to give 99.0% lauryl sulfate
     ammonium salts.
     sulfate ester salt prepn; sulfation sulfamic acid grinding
ST
ΙT
     Sulfation
        (prepn. of sulfate ester salts by sulfation with H2NSO3H grinding in
        reactants)
ΙT
    Alcohols, preparation
     RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP
     (Preparation)
        (C12-13, ethoxylated, esters with sulfamic acid; prepn. of
        sulfate ester salts by sulfation with H2NSO3H grinding in reactants)
ΙT
     Esters, preparation
     RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP
     (Preparation)
        (castor-oil, with sulfamic acid; prepn. of sulfate ester salts by
        sulfation with H2NSO3H grinding in reactants)
     108-95-2DP, Phenol, styrenated, reaction product with polyethylene oxide,
     sulfate salts 110-11-2P, Octyl sulfate 143-03-3P, Stearyl sulfate
                                                           9081-17-8P
     2235-54-3P, Lauryl sulfate ammonium salt 7747-53-7P
     25322-68-3DP, Poly(ethylene oxide), reaction product with styrenated
                          26183-44-8P 55028-14-3P 86592-29-2P
     phenol, sulfate salts
     106864-19-1P
     RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP
     (Preparation)
        (prepn. of sulfate ester salts by sulfation with H2NSO3H grinding in
        reactants)
     111-87-5, Octyl alcohol, reactions 112-53-8, Lauryl
ΙŤ
              112-92-5, Stearyl alcohol 143-28-2, Oleyl
     alcohol 5329-14-6, Sulfamic acid 9002-92-0, Poly(ethylene
     oxide) lauryl ether 9004-98-2, Poly(ethylene oxide) oleyl ether
     9016-45-9 26635-75-6 39278-93-8 106392-12-5, Ethylene
     oxide-propylene oxide block copolymer
     RL: RCT (Reactant); RACT (Reactant or reagent)
        (prepn. of sulfate ester salts by sulfation with H2NSO3H grinding in
```

RL: RCT (Reactant); RACT (Reactant or reagent)

reactants)

```
ANSWER 7 OF 9 REGISTRY COPYRIGHT 2003 ACS
L1
     27028-82-6 REGISTRY
RN
     Ethanol, 2,2',2''-nitrilotris-, compd. with .alpha.-sulfo-.omega.-
CN
     (dodecyloxy)poly(oxy-1,2-ethanediyl) (1:1) (9CI)
                                                     (CA INDEX NAME)
OTHER CA INDEX NAMES:
    Glycols, polyethylene, mono(hydrogen sulfate), dodecyl ether, compd. with
     2,2',2''-nitriloethanol (1:1) (8CI)
     Poly(oxy-1,2-ethanediyl), .alpha.-sulfo-.omega.-(dodecyloxy)-, compd.
CN
with
     2,2',2''-nitrilotris[ethanol] (1:1) (9CI)
OTHER NAMES:
    Alscoap LE 240N
CN
    Alscoap N 3T
CN
    Emal 20T
CN
    Nikkol SBL 2T36
CN
    Nikkol SBL 4T
CN
    Nissan Persoft EFT
CN
    Persoft EFT
CN
     Poly(oxyethylene) lauryl ether sulfate triethanolamine salt
CN
     Poly(oxyethylene) lauryl ether triethanolamine sulfate
CN
     Polyethylene glycol lauryl ether sulfate-triethanolamine salt
CN
     Polyoxyethylene lauryl ether sulfate triethanolamine
CN
     Texapon EXT-NT
CN
CN
     Texapon NT
     Triethanolamine laureth sulfate
CN
     Triethanolamine lauryl ether sulfate
CN
     128808-90-2, 74565-55-2, 52094-59-4
DR
     C6 H15 N O3 . (C2 H4 O)n C12 H26 O4 S
MF
PCT Polyether
                 CA, CAPLUS, CHEMLIST, IFICDB, IFIPAT, IFIUDB, TOXCENTER,
    STN Files:
LC
       USPATFULL
                     NDSL**, TSCA**
     Other Sources:
         (**Enter CHEMLIST File for up-to-date regulatory information)
     CM
          1
     CRN 26183-44-8
     CMF
         (C2 H4 O)n C12 H26 O4 S
     CCI PMS
2
     CM
     CRN 102-71-6
     CMF C6 H15 N O3
             {\rm CH}_2-{\rm CH}_2-{\rm OH}
HO-CH2-CH2-N-CH2-CH2-OH
```

163 REFERENCES IN FILE CA (1962 TO DATE)

1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA 163 REFERENCES IN FILE CAPLUS (1962 TO DATE)

```
L1
     ANSWER 5 OF 9 REGISTRY COPYRIGHT 2003 ACS
     90026-22-5 REGISTRY
RN
     Poly(oxy-1,2-ethanediyl), .alpha.-(3-carboxy-1-oxosulfopropyl)-.omega.-
      (dodecyloxy)-, disodium salt, mixt. with .alpha.-sulfo-.omega.-
      (dodecyloxy)poly(oxy-1,2-ethanediyl) sodium salt (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
     Poly(oxy-1,2-ethanediyl), .alpha.-sulfo-.omega.-(dodecyloxy)-, sodium
     salt, mixt. contg. (9CI)
OTHER NAMES:
CN
     Gamal SBS 11
CN
     Texapon SBN
     (C2 H4 O)n C16 H30 O7 S . (C2 H4 O)n C12 H26 O4 S . 3 Na
MF
CI
     Polyester, Polyether, Polyother
PCT
LC
     STN Files: CA, CAPLUS, USPATFULL
     CM
          1
     CRN
         9004-82-4 (26183-44-8)
     CMF (C2 H4 O)n C12 H26 O4 S . Na
     CCI PMS
Me-(CH_2)_{11}-O-CH_2-CH_2-O-SO_3H
```

Na

$$\begin{array}{c|c} \operatorname{HO} & & & \\ \hline & \operatorname{CH}_2 - \operatorname{CH}_2 - \operatorname{O} \\ \hline & & \\ \end{array} \begin{array}{c} &$$

CM 4

CRN 5138-18-1 CMF C4 H6 O7 S